

1. Cube

- Volume a^3
- C.S.A $4a^2$
- TSA $6a^2$

2. Cuboid

- Volume lbh
- CSA $2(l+b)h$
- TSA $2(lb+bh+hl)$

3. Sphere

- Volume $\frac{4}{3}\pi.r^3$
- TSA $4\pi.r^2$

4. Hemi – Sphere

- Volume $\frac{2}{3}\pi.r^3$
- CSA $2\pi.r^2$
- TSA $3\pi.r^2$

5. Cylinder

- Volume $\pi.r^2h$
- CSA $2\pi.rh$
- TSA $2\pi.rh + 2\pi.r^2$

6. Frustum

$$\text{Volume} = \frac{1}{3}\pi(r_1^2 + r_1r_2 + r_2^2)h$$

$$\text{CSA} = \pi.(r_1+r_2)l$$

$$\text{TSA} = \pi(r_1+r_2)l + \pi.r_1^2 + \pi.r_2^2$$

$$\text{Where } l = \sqrt{(r_1-r_2)^2 + h^2}$$

7. Cone

- Volume $\frac{1}{3}\pi.r^2h$
- CSA $\pi.rl$
- TSA $\pi.rl + \pi.r^2$

8. Statistics

$$\text{Mode} = l + \frac{f_1 - f_0}{2f_1 - f_0 - f_2}h$$

$$\text{Median} = l + \frac{\frac{n}{2} - cf_{-1}}{f}h$$

$$\text{Mean} = a + h \frac{\sum fx}{\sum f}$$

$$3 \cdot \text{Median} = 2 \cdot \text{Mean} + \text{Mode}$$

9. Trigonometry

$$\bullet \sin^2 x + \cos^2 x = 1$$

$$\bullet 1 - \sin^2 x = \cos^2 x$$

$$\bullet 1 - \cos^2 x = \sin^2 x$$

$$\bullet \sec^2 x - \tan^2 x = 1$$

$$\bullet 1 + \tan^2 x = \sec^2 x$$

$$\bullet \sec^2 x - 1 = \tan^2 x$$

$$\bullet \cos ec^2 x - \cot^2 x = 1$$

$$\bullet 1 + \cot^2 x = \cos ec^2 x$$

$$\bullet \cos ec^2 x - 1 = \cot^2 x$$

$$\sin(90 - A) = \cos A$$

$$\sec(90 - A) = \cos ec A$$

$$\tan(90 - A) = \cot A$$

$$\tan A = \frac{\sin A}{\cos A},$$

$$\cot A = \frac{\cos A}{\sin A}$$

$$\sec A = \frac{1}{\cos A}$$

$$\cos ec A = \frac{1}{\sin A}$$